

## **A CUSTOM REPLACEMENT DEVICE FOR RESURFACING A FEMUR AND METHOD OF MAKING THE SAME**

### **ABSTRACT**

A replacement device for resurfacing a joint surface of a femur and a method of making and installing such a device is provided. The custom replacement device is designed to substantially fit the trochlear groove surface, of an individual femur. Thereby creating a "customized" replacement device for that individual femur and maintaining the original kinematics of the joint. The replacement device may be defined by four boundary points, and a first and a second surface. The first of four points is 3 to 5 mm from the point of attachment of the anterior cruciate ligament to the femur. The second point is near the bottom edge of the end of the natural articular cartilage. The third point is at the top ridge of the right condyle and the fourth point at the top ridge of the left condyle of the femur. The top surface is designed so as to maintain centrally directed tracking of the patella perpendicular to the plane established by the distal end of the femoral condyles and aligned with the center of the femoral head.